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ABSTRACT

To determine which measures best predict the seven dimensions of the Intercultural Behavioral Assessment Indices, a study examined 149 international students (mainly from the Far East, Asia, Middle East, Africa, and Europe) at a large midwestern university in the spring of 1986. Average age was 27.5 years, and average length of stay in the United States was 2 years 9 months. Subjects completed questionnaires assessing four aspects of intercultural communication competence: personal attributes (self-disclosure, self-awareness, and social relaxation); communication skills (message and social skills, flexibility, and interaction management); psychological adaptation (frustration, stress, alienation, and ambiguity); and cultural awareness (social values, customs, norms, and systems). After completing the questionnaire, subjects were asked to suggest two American friends, roommates, instructors, or other persons who knew them well. This group of "raters" evaluated the international students' levels of intercultural communication competence by completing Intercultural Behavioral Assessment Indices (composed of display of respect, interaction posture, orientation to knowledge, empathy, relational role behavior, interaction management, and tolerance of ambiguity measures). Booklets were returned for 129 of the subjects. Results revealed significant correlations among measures of personal attributes, communication skills, psychological adaptation, and cultural awareness. Also, the linear combination of the dimension of Intercultural Behavioral Assessment Indices was positively and significantly related to the linear combination of personal attributes, communication skills, psychological adaptation, and cultural awareness dimensions. (One figure and four tables of data are included, and 61 references are appended.) (MM)

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Relationships of the Dimensions of Intercultural Communication Competence

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Relationships of the Dimensions of Intercultural Communication Competence

Although the study of communication competence can be indirectly traced back to Aristotle's rhetoric, until now only a very few scholars have dealt with this topic by considering cultural factors. In other words, there are very few studies of intercultural communication competence. Within the extant literature one variable that most closely related to intercultural communication competence is intercultural communication effectiveness. Some scholars have argued that communication effectiveness can be used interchangeablely with the term communication competence (e.g., Ruben, 1976). However, while some scholars have conceptualized communication competence as a function of perceived effectiveness (Bochner & Kelly, 1974; Parks, 1976; Rubin, 1983), others have looked at communication competence from the viewpoint of appropriateness (Backlund, 1978; Getter & Nowinski, 1981; Trenholm & Rose, 1981; Wiemann & Backlund, 1980). In other words, the conceptualization of communication competence should include effectiveness and appropriateness in interaction.

Historically, according to Hammer, Gudykunst, and Wiseman (1978), three approaches have been used to deal with intercultural communication effectiveness. The first approach focuses on the characteristics of intercultural communication effectiveness (Cleveland, Mangone, & Adam, 1960; Detweiler, 1975; Gardner, 1962; Harris, 1973; Kleinjans, 1972; Mottram, 1963; Stein, 1966). This approach mainly deals with the sojourner's personality, world

view, and cultural awareness. The second approach emphasizes observation of the sojourner's behavior (David, 1972; Ruben, 1976, 1977; Ruben & Kealey, 1979). This approach mainly emphasizes the behaviors of interactants. However, a third approach explores intercultural communication effectiveness through studying both the sojourner's characteristics and behaviors (Abe & Wiseman, 1983; Gudykunst & Hammer, 1984; Gudykunst, Hammer, & Wiseman, 1977; Hammer et al., 1978; Wiseman & Abe, 1984). This is an integrative approach which can lead to better understanding of intercultuarl communication effectiveness.

Appropriateness refers to the ability to demonstrate a knowledge of the socially appropriate communicative behavior in a specific situation (Backlund, 1978). To be competent in intercultural interaction individuals must be able to meet three requirements. First, the verbal context requires individuals make sense in terms of wording, of statements, and of topic. Second, the relationship context requires individuals be consonant with the particular relationship through the use of messages. Lastly, the environmental context requires individuals consider the constraint imposed on message making by the environments (Wiemann & Backlund, 1980).

Intercultural communication competence research from the two aspects can be broken into four main dimensions. First, Personal Attributes refer to fact that competent communicators must know themselves well, and through their self-awareness abilities, initiate positive attitudes. This dimension includes: (1) various

aspects of self-concept, in which individuals see themselves as friendly (Benson, 1978), reliable (Harris, 1973), and honest and sincere (Holland & Baird, 1968); (2) self-disclosure, where individuals are willing to be open or to appropriately tell their counterparts things about themselves in order to achieve their goals (Bochner & Kelly, 1974; Parks, 1976); (3) self-awareness, the ability to monitor or be aware of oneself so that they can implement conversationally competent behaviors in interaction (Spitzberg & Cupach, 1984), and better adjust in other cultures (Brislin, 1979; Gudykunst, Hammer & Wiseman, 1977; Triandis, 1977); and (4) social relaxation, revealing low levels of anxiety in general postural cues, speech, and object manipulation (Spitzberg & Cupach, 1984; Wiemann, 1977).

Second, Communication Skills requires that individuals be competent in verbal and nonverbal behaviors. These behaviors include message skills, flexibility, interaction management, and social skills. All these are elements of communication competence. Message skills are comprised of: (1) linguistic skills, requiring individuals to exhibit not only the knowledge of using language, but also have the ability to execute the language appropriately (Barna, 1979; Chomsky, 1965; Morris, 1960; Parks, 1976); (2) descriptiveness, in which individuals are able to use concrete, specific and descriptive feedback in the process of interaction (Bochner & Kelly, 1974); (3) supportiveness, in which individuals know how to reward or support the other effectively by cues such as eye behavior, head nod, facial expression and

physical proximity (Parks, 1976; Wiemann, 1977); (4) oral message evaluation, in which individuals are able to identify and recognize different kinds of messages (Rubin, 1982); and (5) basic speech communication skills, in which individuals are able to express, ask, answer and organize messages effectively (Rubin, 1982).

Flexibility includes behavior flexibility and adaptability. Both are abilities to choose an appropriate behavior in different situations (Bochner & Kelly, 1974; Duran, 1983; Parks, 1976; Wheeless & Duran, 1982; Wiemann, 1977). Interaction management is the ability to take turns in interaction (Wiemann, 1977; Ruben, 1976, 1977). It includes interaction involvement in which a person is able to be attentive, responsive and perceptive in interaction (Cegala, 1981). Lastly, social skills include empathy or perspective taking, identity maintenance, and human relations skills. Empathy or perspective taking is the ability of individuals to take role of the other in interaction (Bochner & Kelly, 1974; Gardner, 1962; Parks, 1976; Ruben, 1976, 1977; Wiemann, 1977). Identity maintenance is the ability to maintain their interactants' identity in interaction (Kelman, 1962; Parks, 1976). Human relations skills require individuals be able to describe and express different viewpoints and feelings (Rubin, 1982).

Third, Psychological Adaptation refers to the ability to acclimate to a new environment. This dimension consists of dealing with frustration and stress (Furnham & Bochner, 1982;

Hammer, Gudykunst & Wiseman, 1978), alienation (Ruben & Kealey, 1979), and situational ambiguity (Ruben, 1976, 1977) caused by the host culture.

Lastly, Cultural Awareness implies the understanding of environmental varieties, including social values, social customs, social norms, and social systems that affect how people think (Oliver, 1956), the use of time and space (Hall, 1959). In other words, cultural awareness requires individuals to understand the so-called "cultural map" (Kluckhorn, 1948) or "cultural theme" (Turner, 1966) of the host culture.

The four dimensions and components of intercultural communication competence are shown in Figure 1. The goal of the study proposed herein is to investigate the relationships between and among these dimensions and components of intercultural communication competence. Furthermore, Ruben's (1976) Intercultural Behavioral Assessment Indices is used in the study to examine its relationship with the components of intercultural communication competence.

Insert Figure 1 Here

Expected Relationsips Between Dimensions and Components

There still is not enough empirical information to make prediction about the direction of influence between dimensions of intercultural communication competence. However, from the theories of interpersonal and intercultural communication,

relationships among the components of these dimensions are expected. For example, Lundstedt (1963) stressed the importance of relationships between personality factors and sojourner's adjustment in a foreign culture. Lundstedt maintained that close-mindedness and ethnocentrism may affect effectiveness of overseas psychological adjustment. He indicated several effective coping mechanisms in adjustment including personality factors such as relational attitude, open-mindedness, and universalistic tendencies.

The Cegala et al. (1982) study showed positive relationships between Personal Attributes and Communication Skills. The authors found that personality factors such as neuroticism and impulsiveness correlated negatively with communication attentiveness; neuroticism and social anxiety correlated negatively with communication responsiveness, but a positive relationship existed between sociability and communication responsiveness; and social anxiety and communication apprehension correlated negatively with communication perceptiveness but perceptiveness correlated positively with private and public self-consciousness and communication perceptiveness.

Smith (1956) discovered relationships between Personal Attributes and Culture Awareness. In his study of Indian and Japanese students sojourning in the United States, Smith reported that ignorance and disapproval of the Indian or Japanese cultures cause Indian students to be more offensive or hostile and caused Japanese students to be more withdrawing from Americans.

Other studies also showed relationships between Psychological Adaptation and Communication Skills, between Psychological Adaptation and Cultural Awareness, and between Communication Skills and Cultural Awareness. For example, Hammer, Gudykunst, and Wiseman (1978) hypothesized that sojourners who can well understand and interpret another culture's cues may be able to deal effectively with psychological stress caused by the host culture. Studies by Sewell and Davidsen (1956) and Deutsch and Won (1963) showed that ability in the host language influences the degree of sojourner's satisfaction and psychological adjustment. Lastly, Hammer, Gudykunst, and Wiseman (1978) also found that effective communication skills are necessary for sojourners to gather information about various aspects of the host culture. This shows that Cultural Awareness must be based on effective Communication Skills.

Two hypotheses then can be generated from this overview:

H1: There will be significant positive correlations between and among measures of Personal Attributes, Communication Skills, Psychological Adaptation, and Cultural Awareness.

H2: A linear combination of the dimensions of Intercultural Behavioral Assessment Indices will be related significantly and positively to a linear combination of measures of Personal Attributes, Communication Skills, Psychological Adaptation, and Cultural Awareness dimensions. In other words, high scores on display of

respect, interaction posture, orientation to knowledge, empathy, relational role behavior, interaction management, and tolerance for amiguity will be related to high scores on measures of Personal Attributes, Communication Skills, Psychological Adaptation, and Cultural Awareness.

One further research question guides the investigation is: which of the measures used to operationalize the for dimensions of Personal Attributes, Communication Skills, Psychological Adaptation, and Cultural Awareness best predict the seven dimensions of Intercultural Behavioral Assessment Indices?

METHODS

Subjects

The subjects in this study were selected from international students in a large Midwestern university in the Spring of 1986. These students were mainly from the Far East, Asia, Middle East, Africa, Europe, and North America. A few others were from South and Central America, Australia, and the Caribbean. Each international student was assigned a number and 200 potential subjects out of 611 were selected randomly (without replacement) for this study. Of these, 149 international students agreed to participate. Among these, 94 subjects were male and 55 were female. The average age of the subjects was 27.5. Six subjects had English as their native language, all others were from non-English speaking countries. In addition, the average time subjects had stayed in the United States was 2 years and 9 months.

Procedures

The researcher first telephoned the subjects and explained the purpose of the study. The researcher then delivered questionnaires and collected them upon completion. At the end of the questionnaire, international student subjects were asked to suggest two American friends, roommates, instructors, or other persons who knew them well. This group, called "raters" in this study, were sent instrumentation booklets and were asked to rate international students' levels of intercultural communication competence. Booklets were returned to the researcher by mail. When both raters returned booklets to the researcher, the first booklet received was used in the study. American raters returned questionnaire booklet for 129 of the 149 international subjects.

Instrumentation

Raters completed Intercultural Behavioral Assessment Indices developed by Ruben (1976) to measure the general intercultural communication competence of the international students. The instrument was comprised of seven different dimensions of intercultural communication competence: display of respect, interaction posture, orientation to knowledge, empathy, relational role behavior, interaction management, and tolerance of ambiguity. The coefficient alpha (Cronbach, 1951) of the Intercultural Behavioral Assessment Indices was calculated at .80 in the present study. Ruben (1976) failed to report alphas in his previous research.

In addition, an adaptation of Rubin's (1985) Communication

Competency Other-Report Scale was completed by the American rater group about their foreign acquaintances to measure message sending and receiving skills. The present study found the internal reliability of the Communication Competency Other-Report Scale to be .90, compared to the .87 reported by Rubin (1985) for the self-report versions and .91 reported by Wilson (personal communication, May 1986) for the other-report mode.

International student subjects were asked to rate themselves on four different aspects of intercultural communication competence--Personal Attributes, Communication Skills, Psychological Adaptation, and Cultural Awareness.

Although the dimension of Personal Attributes contains four major personal traits, only self-disclosure, self-awareness, and social relaxation were measured in this study. This decision was made to reduce the number of questionnaire subjects were asked to complete, and because reliable and valid scales were available in abbreviated format. Consequently, the General Disclosiveness Scale developed by Wheeless (1978) was used to measure the subjects' general tendency to disclose to others, and the Self-Consciousness Scale developed by Fenigstein, Schelier and Buss (1975) was used to measure subjects' self-awareness and social relaxation. Self-consciousness, as a measure of self-awareness, was operationalized via 23 statements which grouped into three dimensions. A coefficient alpha of .70 was found for privated self-consciousness, .88 for public self-consciousrss, and .77 for social anxiety. Previous research

reported coefficient alphas of .79 for private self-consciousness, .84 for public self-consciousness, .73 for social anxiety, and .80 for overall self-consciousness (Fenigstein et al., 1975). Reliability for overalll self-consciousness was .84 in the present study.

Wheeless's (1978) 31-item General Disclosiveness Scale consists of five dimensions: amount of disclosure, consciously intended disclosure, honesty/accuracy of disclosure, positiveness/negativeness of disclosure, and depth/intimacy of disclosure. The coefficient alphas for the five dimensions in this study were .83 for amount of disclosure, .72 for consciously intended disclosure, .88 for honesty/accuracy of disclosure, .75 for positiveness/negativeness of disclosure, .84 for depth/intimacy of disclosure, and .79 for the total scale. These results are similar to those reported by Wheeless (1978).

Furnham and Bochner's (1982) Social Situations Questionnaire was used to measure the dimension of Psychological Adaptation. The questionnaire measures mainly the individual's ability to deal with ambiguous and stressful situations in a host culture. In the present study, a coefficient alpha of .92 was calculated for the overall scale.

For the dimensions of Communication Skills, Cegala's (1981) Interaction Involvement Scale was used to measure interaction management, and Wheeless and Duran's (1982, 1983) Communication Adaptability Scale was used to measure flexibility. Cegala's (1981) 18-item Interaction Involvement Scale measures

communication responsiveness, perceptiveness, and attentiveness. The coefficient alphas of the three components of the Interaction Involvement Scale were .80 for communication responsiveness, .82 for communication perceptiveness, .65 for communication attentiveness, and .83 for total scale. Previous research by Brunner and Hannigan (1984) reported coefficient alphas of .79 for communication responsiveness, .67 for communication perceptiveness, .82 for communication attentiveness, and .86 for the total scale. Cegala's (1981) study also reported similar internal reliability levels. Wheeless and Duran's (1982) 20-item Communicative Adaptability Scale measures two prominent dimensions of communicative competence: adaptability and rewarding impresssions. The coefficient alphas calculated in this study were .88 for adaptability, .85 for rewarding impresssions, and .90 for the overall scale. Previous research (Wheeless & Duran, 1982) reported coefficient alphas of .86 for adaptability, .87 for rewarding impressions.

Lastly, the Test of American Culture created by Kenji Kitao (1981) was used to measure the dimensions of Cultural Awareness. In order to test the reliability and to reduce the number of questions to be used in the study, a pretest was performed in this scale. Fifty-one American students enrolled in basic speech courses were tested. The results showed that 25 out 50 questions were answered correctly by over ninety percent of the students. Therefore, subjects in the study were asked to complete these 25 questions, some of which were slightly reworded to counteract

vagueness and obsolescence in the original test. The coefficient alpha of the Test of American Culture was .74 for the total instrument. Previous research did not report coefficient alpha for the scale.

RESULTS

Tests of Hypotheses

Hypothesis 1 predicted significant positive correlations among measures of Personal Attributes, Communication Skills, Psychological Adaptation, and Cultural Awareness. Pearson product-moment correlations were computed to test this hypothesis. The results are summarized in Table 1.

Insert Table 1 Here

Results indicated that private self-consciousness was significantly correlated with public self-consciousness (r = .53, p < .001), consciously intended disclosure (r =.25, p < depth/intimacy of disclosure (r = .24, p < .01), rewarding impressions (r = .22, p < .05), and with communication perceptiveness (r = .36, p < .001).

Public self-consciousness was significantly correlated with social anxiety (r = .31, p < .001), consciously intended disclosure (r = .17, p < .05), communication perceptiveness (r = .28, p < .001), and with communication attentiveness (r = -.18, p < .05). Social anxiety was significantly, but negatively corrrelated with consciously intended disclosure

(r = -.19, p < .05), positiveness of disclosure (r = -.27, p < .001), honesty/accuracy of disclosure (r = -.33, p < .001), communication adaptability (r = -.67, p < .001), rewarding impressions (r = -.27, p < .001), social situations (r = -.41, p < .001), communication responsiveness (r = -.49, p < .001), and with communication attentiveness (r = -.19, p < .05)

For the self-disclosure dimension, the results indicated that consciously intended disclosure was significantly correlated with honesty/accuracy of disclosure (r = .54, p < .001), communication adaptability (r = .42, p < .001), rewarding impressions (r = .41, p < .001), social situations (r = .32, p < .001), communication responsiveness (r = .35, p < .001), communication perceptiveness (r = .42, p < .001), and communication attentiveness (r = .36, p < .001). Amount of disclosure was significantly correlated with depth/intimacy of disclosure (r = .44, p < .001). Positiveness/negativeness of disclosure was significantly correlated with communication adaptability (r = .30, p < .001), psychological adaptation (r = .23, p < .01), communication responsiveness (r = .18, p < .05), and communication attentiveness (r = .19, p < .05). Lastly, honesty/accuracy of disclosure was found to be significantly correlated with communication adaptability (r = .45, p < .001), rewarding impressions (r = .47, p < .001), social situations (r = .34, p < .001), communication responsiveness (r = .55, p < .001), communication perceptiveness (r = .25,

$p < .01$), communication attentiveness ($r = .37$, $p < .001$), and with communication competence ($r = .24$, $p < .01$).

Communication adaptability was found to be significantly correlated with rewarding impressions ($r = .40$, $p < .001$), social situations ($r = .45$, $p < .001$), communication responsiveness ($r = .59$, $p < .001$), communication perceptiveness ($r = .17$, $p < .05$), communication attentiveness ($r = .25$, $p < .01$), cultural awareness ($r = .17$, $p < .05$), and with communication competence ($r = .19$, $p < .05$), and with communication competence ($r = .19$, $p < .05$). Rewarding impressions was significantly correlated with social situations ($r = .32$, $p < .001$), communication responsiveness ($r = .46$, $p < .001$), communication perceptiveness ($r = .28$, $p < .01$), and communication attentiveness ($r = .30$, $p < .001$), and with communication competence ($r = .28$, $p < .01$).

The interaction involvement measrues were also found to be significant correlated to other dimensions. For example, communication responsiveness was significantly correlated with communication perceptiveness ($r = .27$, $p < .001$), communication attentiveness ($r = .46$, $p < .001$), cultural awareness ($r = .27$, $p < .001$), and with communication competence ($r = .27$, $p < .01$). In addition, communication perceptiveness was significantly correlated with communication attentiveness ($r = .43$, $p < .001$).

In sum, the results showed significant relationships among measures of self-consciousness, self-disclosure, communication adaptabitiy, social situations, and interaction management. However, the results also showed that the dimension of Cultural

Awareness was only significantly correlated with measures of communication adaptability and communication responsiveness. This indicates that significant relationship exits only between Cultural Awareness and Communication Skills.

To test Hypothesis 2, canonical correlation analysis was used to test the relationship between the linear combination of one set of variables (display of respect, interaciotn posture, orientation to knowledge, empath, relational role behavior, interaction management, and tolerance of ambiguity) and a second set of variables (private self-consciousness, public self-consciouness, social anxiety, consciously intended disclosure, amount of disclosure, positiveness of disclosure, depth/intimacy of disclosure, honesty/accuracy of disclosure, communication adaptability, rewarding impressions, communication responsiveness, communication perceptiveness, communication attentiveness, cultural awareness, social situations, and communication competence). The structure coefficients, which indicate the correlation of the variables in one set with the function in the other set, were used to define the variable sets. The .05 level of confidence was used for all statistical tests.

Table 2 shows that Hypothesis 2 was confirmed. One significant canonical root was found. The canonical correlation (Rc) between the first and second set of variables was .70. An examination of the canonical loadings revealed that the first set was defined by display of respect. Results of the canonical correlation analysis also indicated a significant high positive

relationship between display of respect, interaction posture, orientation to knowledge, empathy, relational role berhavior, interaction management, tolerance of ambiguity and communication competence. In addition, results showed a significant but small positive relationship between display of respect, relational role behavior, interaction posture, orientation to knowledge, empathy, relational role behavior, interaction management, tolerance of ambiguity and both cultural awareness and social anxiety.

Insert Table 2 Here

Exploration of Research Question

To find out which of the measures of Personal Attributes, Communiation Skills, Psychological Adaptation, and Cultural Awareness best predict the seven dimensions of Intercultural Behavioral Assessment Indices, stepwise multiple regression analyses were conducted. Each of the seven dimensions were regressed onto the 16 measures. The results are presented in Table 3.

Insert Table 3 Here

Results indicated that display of respect was best predicted by communication competence, communication perceptiveness, cultural awareness, and social anxiety. Interaction posture was best predicted by communication competence and honesty/accuracy of

disclosure. Orientation to knowledge was predicted by communication competecne and amount of disclosure. Furthermore, empathy, relational role behavior, interaction management, and tolerance of ambiguity were each best predicted by communication competence.

Additional Analyses

Subjects' demographic data were also analyzed in this study. As evidence on Table 4, length of time subjects had lived in the United States was significantly correlated only with rewarding impressions (r = .23, p < .01), communication responsiveness (r = .17, p < .05), and with communication perceptiveness (r = .17, p < .05). Level of acquaintance was significantly correlated only with communication adaptability (r = .20, p < .05), rewarding impressions (r = .28, p < .001), communication responsiveness (r = .28, p < .001), communication competence (r = .44, p < .001), and with Ruben's intercultural behaviors (r = .35, p < .001).

Insert Table 4 Here

T-tests were used to analyze differences between men and women, and native and non-native speakers of English on the 16 measures of intercultural communication competence and Ruben's intercultural behaviors. The result showed (a) males (M = 4.78) were significantly more positive about their self-disclosure than females (M = 4.45), t (141) = 2.08, p < .05; (b) Subject with English as native language (M = 3.65) reported significantly

greater depth in self-disclosure than subjects without English as a native language (M = 2.47), t (143) = -2.23, $p < .05$; (c) subjects with English as a native language (M = 5.98) were significantly higher in communication adaptability than those without English as a native language (M = 5.00), t (140) = 2.26, $p < .05$; (d) subjects with English as a native language (M = 5.93) reported that they were significantly more perceptive in their interaction than subjects without English as a native language (M = 4.90), t (139) = 2.31, $p < .05$; and (e) subjects with English as a native language (M = 23.17) were significantly more culturally aware than subjects without English native language (M = 20.16) t (146) = 2.11, $p < .05$.

Lastly, one-way analysis of variance (utilizing Tukey's post hoc test) was used to investigate differences of nationality and marital status on the 16 measures of intercultural communication and intercultural behaviors. The results showed significant differences between subjects (a) from the Far East (M = 2.81) and Middle East (M = 1.96) on social anxiety, F (5,139) = 3.60, $p < .01$; (b) from Asia (M = 4.93) and Europe (M = 4.06), Africa (M = 5.37) and Europe (M = 4.06), and Africa (M = 5.37) and the Far East (M = 4.55) on positiveness of self-disclosure, F (5,136) = 4.31, $p < .01$; and (c) from Africa (M = 5.63) and the Middle East (M = 3.94) on communication perceptiveness, F (5,134) = 3.36, $p < .01$. No significant differences were found for persons of different marital status.

DISCUSSION

Hypothesis 1 predicted significant correlations among measures of Personal Attributes, Communication Skills, Psychological Adaptation, and Cultural Awareness. Hypothesis 1 basically was supported. Pearson product-moment indicated significant, yet moderate relationships among measures of (a) dimensions of Personal Attributes, Communication Skills, and Psychological Adaptation; and (b) dimensions of Communication Skills and Cultural Awareness. However, the measures of Cultural Awareness dimension did not appear related to Personal Attributes and Psychological Adaptation.

The results concerning the Personal Attributes dimension are consistent with Lundstedt's (1963) proposal that close-mindedness may affect effectiveness of a sojourner's psychological adjustment. Lundstedt's study showed that openness or self-disclosure, especially intent of disclosure and honesty of disclosure, positively correlated with psychological adaptation. The results further support Gardner's (1962) findings. Gardner suggested that the "universal communicator" will have the least amount of psychological difficulty in adjusting to another culture. Gardner described the universal communicator as having a well-integrated personality and a high degree of sensitivity toward others.

The results are, as well, consistent with models proposed by Cegala et al. (1982) and Duran (1983). Cegala et al. found significant relationships between personality factors such neuroticism, impulsiveness, social anxiety, sociability,

communication apprehension, private and public self-consciousness, and interaction management. And Duran found significant relationships between communication apprehension, self-esteem, and communication adaptability.

The results reporting significant relationships between measures of Communication Skills and Psychological Adaptation are consistent with results found by Sewell and Davidsen (1956) and Deutsch and Won (1963). The authors indicated that a sojourner with good communiation skills, especially fluency in the host language, is especially satisfied and psychologically adjusted in another culture. Ruben and Kealey's (1979) findings are also supported by the results. They found that two major elements--empathy and interaction management--were two of the communication skills significantly related to cultural shock. Sojourners with the ability to empathize and take turns in interaction are expected to encounter more psychological adjustment problems at the beginning of a stay in a foreign country because they tend to have more interaction with people. However, the problems will be overcome in a short period of time.

The relationships between Communication Skills and Cultural Awareness support the Hammer et al. (1978) proposal that awareness of another culture is based on the sojourner's effective communication skills. According to Hammer et al., communication skills such as interaction posture and interaction management in Ruben's Intercutural Behavioral Assessment Indices are necessary for sojourners to gather information about various aspects of the

host cultures to interact effectively with the people from the host culture.

Finally, Smith's (1956) findings on relationships between Personal Attributes and Cultural Awareness are not supported in this study. One possible explanation is that the number of indices used to tap the dimensions of Personal Attributes and Cultural Awareness were limited. Also, the Cultural Awareness index used here may not be a valid measure.

Hypothesis 2 predicted that a linear combination of the seven dimensions of Intercultural Behavioral Assessment Indices would be significantly related to a linear combination of measures from the Personal Attributes, Communication Skills, Psychological Adaptation, and Cultural Awareness dimensions. The hypothesis was confirmed. One significant root was produced from the cononical analysis. Display of respect defined the first set while communication competence defined the second set. Conceptually, these loadings seem consistent, suggesting that display of respect and communication competence are related to generalized competence in intercultural communication. Behavioral appropriateness is certainly a strong component of each measure. In fact, it may be that appropriateness is a more salient concept in intercutural communication competence than is effectiveness.

The canonical analysis further indicated a high degree of relationship among display of respect, interaction posture, orientation to knowledge, empathy, relational role behavior, interaction management, and tolerance of ambiguity and between

these indices and communication competence. The same analysis also indicated a significant but small positive relationship between display of respect, interaction posture, orientation to knowledge, empathy, relational role behavior, interaction management, tolerance of ambiguity, and cultural awareness. Because both Ruben's (1976) Intercultural Behavioral Assessment Indices and Rubin's (1985) Communication Competence Other-Report Scale considered the communication skills of behavioral performance, it is not surprising to see the high correlation between intercultural communication competence and communication competence. Previous research by Hall (1959) and Hall and Whyte (1963) also showed the relationship between Communication Skills and Cultural Awareness. The authors indicated that the ability to be aware of one's host culture may lead sojourners to be effective in intercultural communication. The results are also further consistent with the findings in Hypothesis 1 in which Cultural Awareness was found to be significantly correlated with Communication Skills.

The research question in this study sought to determine which of the 16 measures of Personal Attributes, Communication Skills, Psychological Adaptation, and Cultural Awareness best predict the seven dimensions of Intercultural Behavioral Assessment Indices. As revealed in the multiple regression results, the seven dimensions of Intecultural Behavioral Assessment Indices were best predicted by communication competence. The results are consistent with previous research which found that: (a) display of respect to

be an important component in effective interpersonal and intercultural relations (Arensberg & Niehoff, 1971; Carkhuff, 1969; Ruben, 1976, 1977; Ruben & Kealey, 1979; Wiemann, 1977); (b) interaction posture to be positively related to effective cross-cultural interpersonal functioning (Arensberg & Niehoff, 1971; Barna, 1972; Brislin & Pedersen, 1976; Gudykunst et al., 1977; Ruben, 1976, 1977; Ruben & Kealey, 1979); (c) orientation to knowledge to affect the degree of difficulty for sojouner to adjust to other people in another culture (Adler, 1972; Barna, 1972; Bochner & Kelly,1974; Gudykunst et al., 1977; Ruben, 1976, 1977; Ruben & Kealey, 1979); (d) empathy to be an important component in the development and maintenance of positive relationships in cross-cultural effectiveness (Gudykunst et al., 1977; Guthrie & Zetrick, 1967; Ruben, 1976, 1977; Ruben & Kealey, 1979; Samovar & Porter, 1976); (f) that how a person manages interaction has important social sequences (Parks, 1976; Wiemann, 1977), and eventually leads to effectiveness in intercultural communication (Ruben, 1976, 1977; Ruben & Kealey, 1979); and (g) that tolerance of ambiguity is an important asset when adjusting to a new culture (Aitken, 1973; Guthrie & Zetrick, 1967; Ruben, 1976, 1977; Ruben & Kealey, 1979).

The results furthermore showed that: (a) display of respect was also explained by communication perceptiveness and social anxiety, (b) interaction posture was also explained by honesty of disclosure, and (c) orientation to knowledge was also explained by amount of disclosure.

Finally, the level of acquaintance was found to be significantly correlated with communication competence and Intercultural Behavioral Assessment Indices. The results reflected social penetration theory in which Altman and Taylor (1973) indicated that intimate relationships are defined by breadth and depth of self-disclosure. Since the previous literature review had shown that self-disclosure is one of the main components in effective communication with people from the same or different cultures, it was predictable that people who know better the sojourners would have more information on which to base their judgments of communication and intercultural communication competence.

The results of this study stress the interrelationships among the dimensions and components of intercultural communication competence. However, even though each original dimension was comprised of several different components, only a limited number of the components could be examined in this study. Subject fatigue and the effects of instrumentation would have become too great if each component was fully tapped. So evidence about the relationships among the dimensions and components of intercultural communication competence is still incomplete at this time. Future research should examine more components of intercultural communiation competence in order to develop a more complete understanding of the interrelationships among these dimensions and components.

The study of intercultural communication may include several

of the inherent limitations mentioned by Klopf and Cambra (1983); these were originally derived from Campbell's (1969) lists of fifteen factors that may jeopardize the validity of cross-cultural research data. First, social variables may affect the one being measured on survey responses. For example, in some cultures self-disclosure is not positively valued and so subjects might score themselve low on this trait. Second, paper-pencil testing may be an uncommon activity in many cultures even though these subjects are used to such tests in college, they may not be used to revealing such personal information. Lastly, response biases such as giving inaccurate answers to researchers of different races may affect the validity of data. For this study, these problems might have been reduced to a minimum level because of initial agreement to participate and the use of outside raters. Future research in intercultural settings should avoid these barriers.

The results of this study has great potential for future research. For instance, factor analysis might be used to investigate if the dimensions proposed in this study is the best model to explain intercultural communication competence. Future research may, as well, examine whether a person has to possess all the dimensions of intercultural communication competence to be effective in foreign cultures or only possess some of them. In addition, a scale of intercutural communication competence might be created in the future by using those components proposed in this study.

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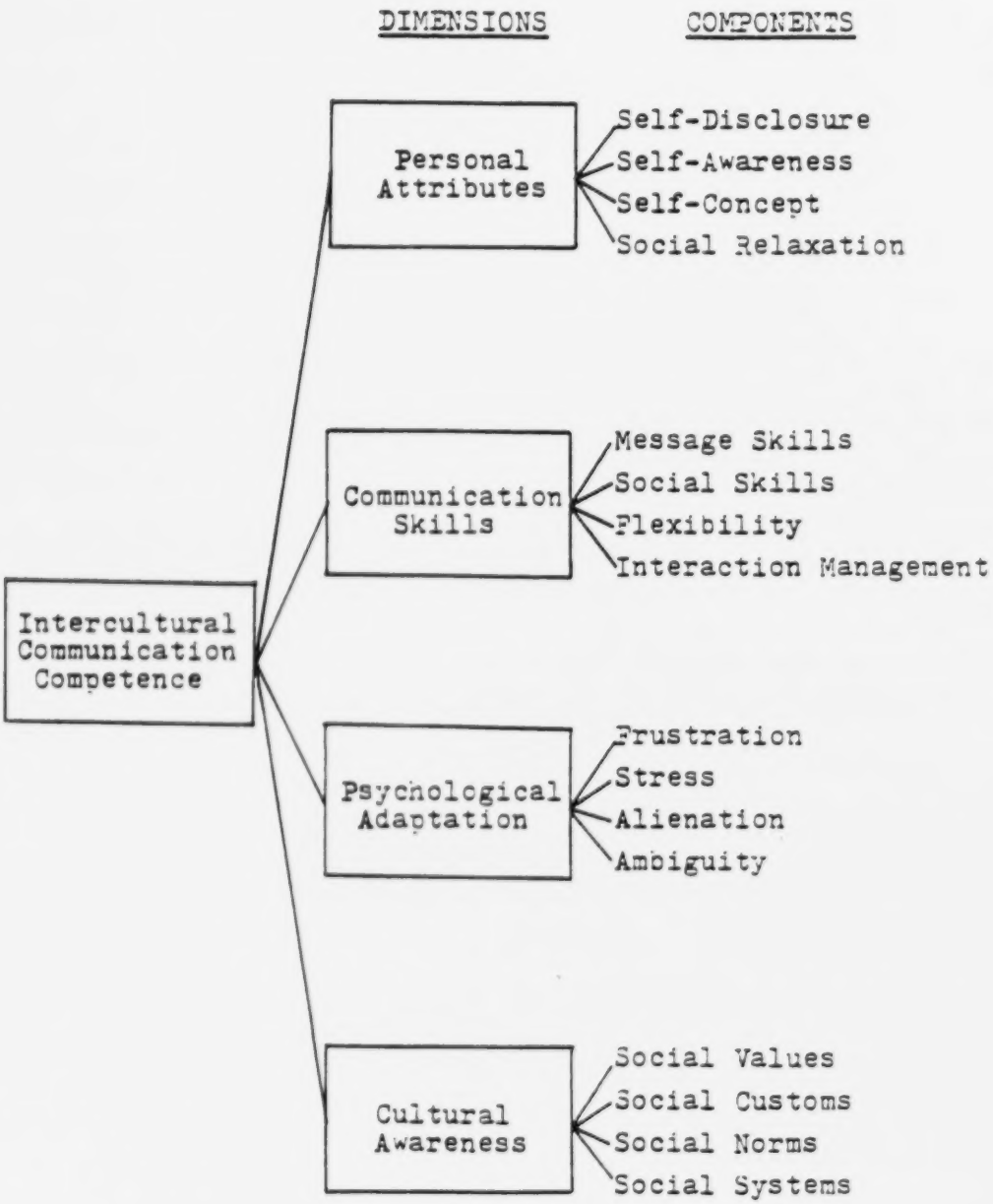

Figure 1. The dimensions and components of intercultural communication competence.

Table 1

Pearson Correlation Coefficients for Variables

Variables	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Private Self-Consciousness	.53[c]	-.02	.25[b]	.16	-.08	.24[b]	.23[b]	.10	.22[b]	.11	.04	.36[c]	.12	-.16	.10
2. Public Self-Consciousness		.31[c]	.17[a]	.09	-.13	.14	.01	-.04	.10	-.08	-.09	.28[c]	-.18[a]	-.09	.09
3. Social Anxiety			-.19[a]	-.13	-.27[c]	-.04	-.33[c]	-.67[c]	-.27[c]	-.41[c]	-.49[c]	.01	-.19[a]	-.06	.02
4. Intent of Disclosure				-.11	.05	-.03	.54[c]	.42[c]	.41[c]	.32[c]	.35[c]	.42[c]	.36[c]	.13	.10
5. Amount of Disclosure					-.05	.44[c]	.04	.09	.08	-.02	-.07	.02	-.06	-.02	.00
6. Positive of Disclosure						-.01	.10	.30[c]	.13	.23[b]	.18[a]	.06	.19[a]	-.01	.04
7. Depth of Disclosure							-.02	.02	.14	.01	-.10	.10	.11	.03	-.01
8. Honesty of Disclosure								.45[c]	.47[c]	.34[c]	.55[c]	.25[b]	.37[c]	.08	.24[b]
9. Adaptability									.40[b]	.45[c]	.59[b]	.17[a]	.25[b]	.17[a]	.19[b]
10. Rewarding Impressions										.32[c]	.46[c]	.28[c]	.30[c]	.15	.28[b]
11. Social Situations											.46[c]	.20[a]	.29[c]	.01	.06
12. Responsiveness												.27[b]	.46[c]	.27[c]	.27[b]
13. Perceptiveness													.43[c]	.03	.12
14. Attentiveness														.09	.10
15. Cultural Awareness															.14
16. Competence															--

[a] $p < .05$, [b] $p < .01$, [c] $p < .001$

Note. $N = 149$, except for competence where $N = 129$.

Table 2

Canonical Analysis Summary for Intercultural Behavioral Assessment Indices and Intercultural Behaviors

	Root 1	
	Canonical Loading	Structure Coefficients
Set 1: IBAI		
Respect	.33	.80[c]
Posture	.24	.72[c]
Knowledge	.14	.53[c]
Empathy	.21	.69[c]
Relational Role	.13	.67[c]
Interaction Management	.25	.69[c]
Ambiguity	.15	.59[c]
Redundancy Coefficients	(.02)	(.22)
Set 2: Intercultural Behaviors		
Private Self-Consciousness	.03	.05
Public Self-Consciousness	.02	.13
Social Anxiety	.17	.18[a]
Intent of Disclosure	.09	.02
Amount of Disclosure	.09	.08
Positiveness of Disclosure	-.01	-.05
Depth of Disclosure	-.02	-.02
Honesty of Disclosure	-.22	.02
Adaptability	-.03	.11
Rewarding Impressions	.02	.12
Social Situations	.13	.01
Responsiveness	.11	.19
Perceptiveness	-.16	-.06
Attentiveness	-.16	-.10
Cultural Awareness	.19	.28[b]
Competence	.93	.92[c]
Redundancy Coefficients	(.03)	(.03)

Note 1. R_c = .70, R_c^2 = .48, lambda = .29, $F(112, 824)$ = 1.57 $p < .001$.

Note 2. [a] $p < .05$, [b] $p < .01$, [c] $p < .001$.

Table 3

Summary of Stepwise Multiple Regression Analysis

Source of Variation	R	R^2	F	p	beta
1. Display of Respect					
Competence	.52	.27	53.58	.001	.53
Perceptiveness	.55	.30	31.73	.001	-.19
Cultural Awareness	.58	.33	24.04	.001	.17
Social anxiety	.59	.35	19.54	.001	.14
2. Interaction Posture					
Competence	.44	.19	35.58	.001	.44
Honesty of Disclosure	.47	.22	20.60	.001	-.16
3. Orientation to Knowledge					
Competence	.32	.10	16.44	.001	.32
Amount of Disclosure	.36	.13	10.54	.001	.16
4. Empathy					
Competence	.45	.20	37.71	.001	.45
5. Relational Role Behavior					
Competence	.40	.16	28.10	.001	.40
6. Interaction Management					
Competence	.45	.20	37.35	.001	.45
7. Tolerance of Ambiguity					
Competence	.37	.14	23.34	.001	.37

Note. $N = 149$; means were substituted for missing data.

Table 4

Pearson Correlation Coefficients for Demographic Variables

Variable	Age	Years in the U.S.A.	Level of Acquaintance
1. Private Self-Consciousness	-.07	.01	-.02
2. Public Self-Consciousness	-.13	.03	.14
3. Social Anxiety	-.04	-.06	.01
4. Intent of Disclosure	-.22[b]	-.00	.17
5. Amount of Disclosure	-.06	.02	.02
6. Positiveness of Disclosure	.18[a]	.14	-.09
7. Depth of Disclosure	-.08	.10	.07
8. Honesty of Disclosure	-.06	.02	.12
9. Adaptability	-.08	.14	.20[a]
10. Rewarding Impressions	-.04	.23[b]	.28[c]
11. Social Situations	-.09	.08	-.08
12. Responsiveness	-.03	.17[a]	.28[c]
13. Perceptiveness	-.01	.17[a]	.01
14. Attentiveness	-.02	.13	.15
15. Cultural Awareness	-.20	-.07	.25
16. Competence	.06	.13	.44[c]
17. Intercultural Communication Competence	-.07	-.07	.35[c]

[a] $p < .05$, [b] $p < .01$, [c] $p < .001$

$N = 149$